Decision Memo for Electrical Bioimpedance for Cardiac Output Monitoring (CAG-00001N)

Decision Summary

Rescind the current instruction (50-54, CIM) which excludes coverage of this diagnostic service, replacing it with an instruction providing for coverage of this form of plethysmography for hemodynamic measurements.

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Decision Memo

September 22, 1998

Recommendation:

Rescind the current instruction (50-54, CIM) which excludes coverage of this diagnostic service, replacing it with an instruction providing for coverage of this form of plethysmography for hemodynamic measurements.

Basis for Recommendation:

One manufacturer, Cardiodynamics, has submitted substantial documentation on the medical effectiveness of their device which answers the questions we had raised during previous assessments (in 1989 and 1992). The manufacturer submitted over 70 peer-reviewed studies on more than 5,000 patients, conducted by 600 researchers at 275 institutions. We also performed an independent review of the medical literature and found no substantial problems in proceeding with coverage. That review indicated that there were some areas in which this technology was not yet fully proven, but they were relatively minor, and did not represent the primary uses for which this technology will be employed in Medicare beneficiaries.

Specifications for Coverage:

Coverage extended to Cardiodynamics device, as well as other devices (3 knownRenaissance Technologies, Sorba Medical Systems and Hemo Sapiens) that utilize the same technology to produce hemodynamic measurements of cardiac outputstroke volume, contractility, systemic vascular resistance and fluid level.

Covered for noninvasive monitoring of hemodynamics in patients with suspected cardiovascular disease, including surgical, critically ill, step-down or emergency patients; differentiation of cardiogenic from pulmonary causes of acute dyspnea, optimization of atrioventricular interval for patient with A/V sequential cardiac pacemakers; patients with need of determination for intravenous inotropic therapy; post heart transplant myocardiac biopsy patients; and patients with the need for fluid management.

Not covered are the use of such device for any monitoring of patients with proven or suspected disease involving severe regurgitation of the aorta, or for patients with minute ventilation (MV) sensor function pacemakers, since the device may adversely affect the functioning of that type of pacemaker. Also, these devices do not render accurate measurements in cardiac bypass patients while on a cardiopulmonary bypass machine, but do provide accurate measurements prior to and post bypass pump.

Codes for this procedure are currently available. The appropriate HCPCS codes are as follows:

93720 Plethysmography, total body; with interpretation and report
93721 Plethysmography, total body; tracing only, w/o interpretation and report
93722 Plethysmography, total body; interpretation and report only

Next Action:

If approved, replace current instruction (CIM 50-54), with draft instruction (copy attached) setting forth new coverage.

Approval/disapproval:

Approved: _____ Date: _____

Disapproved: _____ Date: _____

Comments: _____

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